



HYB-005US7.ST25

SEQUENCE LISTING

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Yu, Dong
Agrawal, Sudhir

<120> Modulation of Immunostimulatory Activity of Immunostimulatory
Oligonucleotide Analogs By Positional Chemical Changes

<130> HYB-005US7 (1006.006)

<140> US 10/694,207
<141> 2003-10-27

<150> US 09/965,116
<151> 2001-09-26

<150> US 09/712,898
<151> 2000-11-15

<150> US 60/235,452
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<223> cc = 1',2'-Dideoxyribose

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<222> 4, 7

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<222> 10

<223> g = C3-Linker

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<210> 25

<211> 18

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<223> a = C3-Linker

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<210> 26

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<222> 5

<223> c = C3-Linker

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 <223> a at position 4 = C3-Linker
 c at position 5 = C3-Linker

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 <221> modified_base
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 <223> cc at positions 1 & 2 = C3-Linker

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 <210> 29
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 <223> t = C3-Linker

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 <223> t at position 14 = C3-Linker
 c at position 15 = C3-Linker

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 <223> a = C3-Linker

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 <221> modified_base

<222> 4
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<210> 36
<211> 18
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<400> 36
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<210> 37
<211> 18
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<223> t = Spacer18

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<210> 43

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<222> 8

<223> a = Amino-Linker

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<210> 44

<211> 18

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<222> 7

<223> g = Amino-Linker

<400> 44

ctatctgacg ttctctgt

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<210> 45

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<400> 46
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<222> 10
<223> g = 3'-Deoxynucleoside

<400> 48
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<223> c = 3'-Deoxynucleoside

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<223> c = 3'-Deoxynucleoside

<400> 50
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<223> c = 3'-Deoxynucleoside

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<223> g = 3'-Deoxynucleoside

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<223> g = 3'-Deoxynucleoside

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<223> c = 3'-Deoxynucleoside

<400> 55
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<210> 56
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<223> a = Methyl-phosphonate

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<223> t = Methyl-phosphonate

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<210> 60
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<223> c = Methyl-phosphonate

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<223> t = Methyl-phosphonate

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 <223> a at position 3 = Methyl-phosphonate
 t at position 4 = Methyl-phosphonate

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 <210> 63
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 <221> modified_base
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 <223> t = Methyl-phosphonate

 <400> 63
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 <210> 64
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<222> 13
<223> c = Methyl-phosphonate

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<223> t = Methyl-phosphonate

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<210> 67
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<223> c = Methyl-phosphonate

<400> 67
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<210> 68
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<221> modified_base
<222> 15, 16
<223> c at position 15 = Methyl-phosphonate
t at position 16 = Methyl-phosphonate

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ctatctgacg ttctctgt 18

<210> 69
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<223> a = 2'-O-Methylribonucleoside
<400> 70
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<210> 71
<211> 19
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<223> modified linkage of oligodeoxynucleotide phosphorothioate
<221> modified_base
<222> 5
<223> t = 2'-O-Methylribonucleoside
<400> 71
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<210> 72
<211> 19
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<213> Artificial Sequence
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<221> modified_base
<222> 2, 3
<223> c at positions 2 & 3 =
2'-O-Methoxyethylribonucleoside
<400> 72
tccatgacgg tcctgatgc 19
<210> 73
<211> 16
<212> DNA
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<223> modified linkage of oligodeoxynucleotide phosphorothioate

<400> 73
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 <210> 74
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 <223> 3'-5' linkage
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 <221> modified_base
 <222> 16
 <223> 3'-3' linkage
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 <223> 3'-5' linkage

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<210> 79
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<221> modified_base
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 <223> 5'-5' linkage

<400> 79
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<210> 80
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<221> modified_base
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 <223> 3'-3' linkage

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<210> 81
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<221> modified_base
 <222> 5
 <223> c = beta-L-Deoxynucleoside

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ctatctgacg ttctctgt 18

<210> 82
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<221> modified_base
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<223> t = beta-L-Deoxynucleoside

<400> 82
ctatctgacg ttctctgt 18

<210> 83
<211> 18
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<221> modified_base
<222> 4, 5
<223> t at position 4 = beta-L-Deoxynucleoside
c at position 5 = beta-L-Deoxynucleoside

<400> 83
ctatctgacg ttctctgt 18

<210> 84
<211> 18
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<221> modified_base
<222> 14, 15
<223> t at position 14 = beta-L-Deoxynucleoside
c at position 15 = beta-L-Deoxynucleoside

<400> 84
ctatctgacg ttctctgt 18

<210> 85
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<221> modified_base
<222> 9, 10
<223> c at position 9 = beta-L-Deoxynucleoside
g at position 10 = beta-L-Deoxynucleoside

<400> 85
ctatctgacg ttctctgt 18

<210> 86
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 7
<223> g = beta-L-Deoxynucleoside

<400> 86
ctatctgacg ttctctgt 18

<210> 87
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 12
<223> t = beta-L-Deoxynucleoside

<400> 87
ctatctgacg ttctctgt 18

<210> 88
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> (1)...(18)
<223> all nucleotides = beta-L-deoxynucleoside

<400> 88
ctatctgacg ttctctgt 18

<210> 89
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 5
<223> c = 2'-O-Propargyl-ribonucleoside

<400> 89
ctatctgacg ttctctgt 18

<210> 90
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 15
<223> c = 2'-O'Propargyl-ribonucleoside

<400> 90
ctatctgacg ttctctgt 18

<210> 91
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = 1',2'-Dideoxyribose
c at position 5 = 1',2'-Dideoxyribose

<400> 91
cctactagcg ttctcatc 18

<210> 92
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4, 5
<223> a at position 4 = C3-Linker
c at position 5 = C3-Linker

<400> 92
cctactagcg ttctcatc 18

<210> 93
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 4, 5
 <223> a at position 4 = 3'-methoxyribonucleoside
 c at position 5 = 3'-methoxyribonucleoside

<400> 93
 cctactagcg ttctcatc 18

<210> 94
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 4, 5, 12
 <223> a at position 4 = 1',2'-Dideoxyribose
 c at position 5 = 1',2'-Dideoxyribose
 t at position 12 = 2'-methoxyribonucleoside

<400> 94
 cctactagcg ttctcatc 18

<210> 95
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified linkage of oligodeoxynucleotide phosphorothioate

<400> 95
 cctactaggc ttctcatc 18

<210> 96
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
 <222> 10
 <223> g = 7-deazaguanine

<400> 96
 ctatctgacg ttctctgt 18

<210> 97
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> g = 7-deazaguanine

<400> 97
ctatctgagc ttctctgt 18

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<400> 98
tctcccagcg tgcgccat 18

<210> 99
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 10,14
<223> g at positions 10 and 14 = 7-deazaguanine

<400> 99
tctcccagcg tgcgccat 18

<210> 100
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 5
<223> c = C3-Linker

<221> modified_base
<222> 10
<223> g = 7-deazaguanine

<400> 100
ctatctgacg ttctctgt 18

<210> 101
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 10
<223> g = 6-thioguanine

<400> 101
ctatctgacg ttctctgt 18

<210> 102
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> g = 6-thioguanine

<400> 102
ctatctgagc ttctctgt 18

<210> 103
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 9
<223> c = 4-thiouridine

<400> 103
ctatctgacg ttctctgt 18

<210> 104
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 5

<223> c = 1,2-Dideoxyribose

<221> modified_base

<222> 9

<223> c = 4-thiouridine

<400> 104

ctatctgacg ttctctgt

18

<210> 105

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 9

<223> c = Ara-C

<400> 105

ctatctgacg ttctctgt

18

<210> 106

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 10

<223> c = Ara-C

<400> 106

ctactctgac cttctctgt

19

<210> 107

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 9

<223> c = 1',2'-Dideoxyribose

<400> 107

ctatctgacg ttctctgt

18

<210> 108

<211> 18

<212> DNA

<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 8
<223> a = 1',2'-Dideoxyribose

<400> 108
ctatctgacg ttctctgt 18

<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 6
<223> t = 1',2'-Dideoxyribose

<400> 109
ctatctgacg ttctctgt 18

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 4
<223> t = 1',2'-Dideoxyribose

<400> 110
ctatctgacg ttctctgt 18

<210> 111
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base
<222> 11
<223> t = 1',2'-Dideoxyribose

<400> 111
ctatctgacg ttctctgt 18

<210> 112
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> modified oligodeoxynucleotide phosphorothioate

<221> modified_base

<222> 13

<223> c = 1',2'-Dideoxyribose

<400> 112

ctatctgacg ttctctgt

18